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ORIGINAL ARTICLES

A REPORT ON 12 CASES OF POST-OPERATIVE ABSCESS OF THE LUNG AND TWO CASES POST-OPERATIVE PNEUMONIA.

By Harry Lee Barnes, M.D.*
Wallum Lake, R. I.

While we are not supposed to have non-tuberculous patients at Wallum Lake, post-operative lung cases are quite occasionally believed to be tuberculosis and sent to the Sanatorium. We rarely see the pneumonia or other acute complications, but only the chronic cases, mostly lung abscesses. The following 12 cases of lung abscesses followed operations under general anesthesia.

Case No. 4247. Woman, age 21, admitted Sept. 30, 1918. Sypmtoms began as a bad cold after tonsillectomy 3 months before. Marked dullness, moist rales to the fifth rib on the right side with pleurisy signs at the base. Few rales at the left apex. Expectorated up to 250 c.c. of foul smelling pus daily. No tubercle bacilli. Septic, temperature, great emaciation and weakness. Operation at R. I. Hospital. Recovery. Completely free from lung symptoms four years later.

Private patient. Man age 40. Seen in November, 1918. Lung symptoms began about a week after tonsillectomy, several months previously. A great amount of fetid expectoration. Consolidation in right lower lobe, large moist rales all over right lung and upper third of left lung. Several pneumothorax treatments of 300 c.c. of air were followed by homoptysis and were discontinued. Drainage of the right lower lobe by a Providence surgeon greatly relieved the patient of harassing cough and almost entirely stopped the expectoration of pus, but left a discharging sinus which had not healed nearly a year afterward.

Case No. 6039. Boy, age 14, admitted April 2, 1922. Lung symptoms began "Soon" after tonsillectomy over 4 months previously. Signs of consolidation with cavity in right upper lobe. Slight dullness and moist rales at left apex; X-ray confirmation of above signs. Daily expectoration up to 200 c.c. of foul smelling pus. Temperature up to 103.6. Drainage of abscess in right upper lobe was followed by marked relief in septic, temperature, cough and amount of expectoration, but the patient still has troublesome cough and discharging sinus 7 months later.

Case No. 5270. Man age 20. Patient claimed to have had a "bronchitis" following an operation for ischio rectal abscess in the spring of 1917. Admitted Sept. 25, 1920. Soon after tonsil operation patient had an attack of "bronchitis," accompanied by bad tasting and bad smelling sputum which has persisted. Amount of sputum daily varies from 105 to 400 grams. Right upper and middle lobe show dullness, moist rales and breath changes. Patient declined operation and returned to Sanatorium July 21, 1921. Left base shows dullness and moist rales. Oct. 7, 1921, pneumothorax treatment begun by Dr. Rosenblatt. Nov. 6, right lung pretty well collapsed. Nov. 20, hemoptysis 12 oz., temperature 102.8, probable rupture of right lung. Nov. 30, 1921, 400 c.c. of foul-smelling pus evacuated from right pleural cavity. Dec. 11 patient appears some better. Amount of pus discharged from tube in right pleura much reduced by gentian violet irrigations. Dec. 23, 1921, patient died, a few days after developing signs of pneumothorax on untreated side.

Case No. 5908. Man, age 32. Lung symptoms began a few weeks after appendectomy in August, 1921. Admitted Dec. 19, 1921. Dullness and medium moist rales down to second rib on right side. Irregular temperature from normal to 102.5. Expectoration of offensive smelling pus up to 390 grms. daily. X-ray shows marked mottling from second to fifth ribs on the right side. Left lung: Apex cloudy with slight mottling. Fine mottling in the first five interspaces. Operation in the Woonsocket Hospital in January, 1922, for drainage of abscess in the right lung. Patient was relieved of sepsis and expectoration of offensive pus and is working daily but has some cough (September, 1922).

Case No. 5461. Woman, age 18. Three days

*Read before the Providence Medical Society November, 1922.

after tonsillectomy in November, 1920, had pain in the right side, cough and dyspnea. Has noticed a bad odor to the sputum since November. Admitted Feb. 10, 1921. Whole right lung dull and many medium moist rales throughout. Cavity signs about third and fourth ribs. Cavity shows plainly under fluoroscopic examination. Left lung free from definite signs. Operation advised. Patient's subsequent condition unknown.

Case No. 6185. Girl, age 14. Cough and expectoration of offensive sputum began soon after tonsillectomy in August, 1921. Admitted June 28, 1922. Dullness and suppressed breathing at both bases, with cavity signs at right base. X-ray shows dense mottling, suggesting consolidation in lower half of both lower lobes. Under postural drainage four times daily, amount of sputum dropped from 125 grms. to 78 grms. in a few months, with reduction of temperature, gain in general appearance, and gain of 3 lbs. in weight. Operation not advised.

Case seen in consultation. Woman, age 30, a few days after tonsillectomy, developed cough and pain in the right side. A few weeks later a slight amount of fluid was drawn from right pleural cavity. Patient had been expectorating a scanty amount of foul smelling sputum at times. My examination about 4 months afterward showed some dullness at the right base and a few rales at the left apex, where she had recently had a little pain on breathing. X-ray showed considerable enlargement of the bronchial trunks in the right lower lobe and a shadow about the size of a butternut, suggesting consolidation near the right base in the lung parenchyma, near the spine. Attempts at postural drainage apparently did not bring up sputum but did cause the breath to have an offensive odor during the time that patient was in inverted position. Patient refused to have bronchoscopic drainage tried. In 6 weeks the X-ray appearance of the abscess appeared unchanged, but the cough and general condition improved, and the expectoration ceased.

Case 5541. Woman, age 27. Cough and other lung symptoms began one week after removal of tonsils and adenoids, July 17, 1920. Admitted April 5, 1921. Dullness over whole right lung, most pronounced at base, where there was increased vocal resonance and bronchial breathing. X-ray film showed clouding at right base. Patient has noticed a bad taste to the sputum and her mother noticed a bad odor to the breath. Patient left Sanatorium unimproved.

Case No. 4780. Boy, age 10. Tonsil and adenoid operation April, 1919. Admitted to the Sanatorium Sept. 15, 1919. The onset of the cough and expectoration and other pulmonary symptoms followed soon after the operation. The sputum has a very offensive odor, the maximum amount for 24 hours being 225 c.c. Examination showed dullness and medium moist rales throughout the right lung, most marked at the base. A few medium moist rales at the left apex and left base. X-ray film showed heavy clouding and mottling at the right base with two areas of rarefaction. Patient was discharged Dec. 22, 1920, unimproved.

Patient seen in consultation. Woman, age 34. About 3½ years previously several teeth were extracted under ether. A few days after the operation, cough and the expectoration of offensive sputum began, and has continued ever since. The cough was very harassing and when the patient was stood on her head, about half a pint of offensive pus gushed out. Examination shows moist rales, bronchial breathing and pectoriloquy at the left base. Moist rales were scattered over the whole left lung and to a less extent over the right lung. Postural drainage tried for several weeks gave no relief.

Case seen in consultation. Man, age 24, seen by me in October, 1920. Operation for tonsils and adenoids in the preceding July was followed in about 3 weeks with cough and expectoration and loss of strength. Examination showed dullness, bronchovesicular breathing and other signs of consolidation in the right lower lobe. Patient had a harassing cough and profuse expectoration of fetid pus. Operation advised and refused. About 3 weeks later patient had a violent coughing spell and enough dyspneoa while emptying out the pus, to frighten him. Operated on the following December in Boston. After several weeks of drainage the sinus almost closed and patient exceeded his previous maximum weight and returned to work absolutely free from lung symptoms. After working a few weeks, patient died after a short illness with symptoms of cerebral spinal meningitis. I have seen another patient who was operated on for a lung abscess and who died of meningitis occurring several weeks after what ap-

peared to be complete recovery from all lung symptoms, the health seeming perfect.

In all the above 13 cases, examination of the sputum for tubercle bacilli was repeatedly negative.

The following case of post-operative pneumonia was of considerable interest to the writer, who was intimately acquainted with the victim, the latter being a physician. Contemplating the extraction of 10 teeth under gas, the patient confided to his wife his obsession that blood would be aspirated and took elaborate precautions to have the mouth clean. The teeth, which had recently been scraped, were given an extra scrubbing and the mouth and throat repeatedly washed with salt solution and cleansed with alcohol just before going to the dentist's office. The dentist was asked to take care to keep the head forward to prevent blood going back. The dentist, who had no fear of blood aspiration, and who ascribed the patient's request to nervousness, allowed the head to go back while the patient was unconscious and bleeding freely. Soon after the backward movement of the head, the patient's wife, who was a trained nurse, noticed a slight cough and gurgling sound, followed in a few seconds by marked blueness of the face and very weak pulse. These symptoms disappeared in a few minutes, but on the third day, pleuritic pain in the right side, a chill, cough and rise of temperature to 100.6 ensued. Signs of pneumonia at the right base and finally involving the lower half of the right lung, and signs over an area the size of a silver dollar about the termination of the left bronchus, appeared. Fortunately perfect recovery followed in about a month. In addition to the case of pneumonia and the cases of abscesses of the lung following teeth extraction reported in this paper, the writer learned through colleagues of 4 cases of pulmonary sequelæ to teeth extraction under anaesthetic. Of these, 3 cases were pneumonia, of whom all died, and one case of lung abscess, who recovered.

Diagnosis.

Whipple and his associates at the Presbyterian Hospital in New York have shown that in post-operative cases with unexplained temperature, the X-rays frequently show a wedge-shaped shadow extending from the hilus toward the pleura and clearing up soon after defervescence, which is regarded as a pneumonia.

In the last five years, I have seen over 20 cases of abscess of the lung which have been diagnosed as tuberculosis. There is a great similarity in the symptoms of chronic lung abscess and pulmonary tuberculosis, for in both there may be cough, expectoration, pleurisy and blood spitting, night sweats, emaciation and progressive weakness. Any patient who says his lung symptoms began after teeth extraction or nose and throat operation, especially tonsillectomy, should be suspected of having a lung abscess.

While it is common enough to see tuberculosis patients with negative sputum, it is nevertheless true, that when a patient expectorates a large amount of purulent sputum which is free from tubercle bacilli, and which has an offensive odor, he almost certainly is suffering from non-tuberculous lung disease. Lung abscesses are usually at the bases, and lesions worse at the bases are rarely tuberculous.

It is often difficult and sometimes impossible to decide whether a post-operative lesion was originally bronchiectasis or abscess because lung abscess patients in a few months may show X-ray evidence of bronchiectasis, which has been produced by the abscess and some patients who originally have bronchiectasis finally develop true abscesses. Some clinicians do not consider that there is a true abscess without an abscess wall. In most of the chronic lung abscesses I have seen, the X-ray showed little or no evidence of an abscess wall.

In many of these post-operative cases, good stereographic pictures of the lung will show what appears to be the infiltration of the lung tissue with a thin characteristic homogeneous shadow, which suggests pus.

Prophylaxis.

All operations on the upper air passages should be followed up a month or two afterward or many post-operative pulmonary complications will never be heard of by the operators, who will get no incentive to reduce the risks. While the occasional occurrence of septic emboli must be admitted, the fact that in twelve of the fourteen cases of lung abscess after tonsillectomy above reported the right lung was most affected, points directly toward aspiration as the usual cause. Thorough cleansing of the nose, throat and mouth before operating and sterilizing the field with iodine are

logical and should reduce the danger. I can say nothing of the details of operative technique, as I know nothing of the subject, but I cannot refrain from giving my impression that details of operative technique are not the main defense against aspiration. I believe that the best protection is an anesthesia not too deep for coughing, a position (like the sitting posture) in which the head can be brought forward to drain the blood from the mouth, and an operator keenly alive to the danger of aspiration, who will watch the bleeding and bring the head forward in time. Fluids do not run up hill and if statistics from a sufficient number of cases can be produced to show that lowering the head will prevent aspiration, a strong incentive would be given toward operating in this position.

Treatment.

In lung abscesses, if the X-ray shows that the abscess wall is small and not increasing in size, if the location is one difficult of access and if there is little evidence of general sepsis, it would seem sensible to let it alone. If it is large, well defined and rapidly extending to the periphery, with marked symptoms of sepsis, operation seems indicated. If both lungs are extensively involved, operation seems hopeless and hardly worth while. We have started many of our abscess and bronchiectasis cases with postural drainage, by having them lie across a table on their stomach with the head hanging down to the floor, 3 or 4 times a day. This procedure usually will evacuate several ounces of pus and sometimes a teacupful, in a few seconds, and a few cases have seemed to be improved by it. In most of the cases there was no marked improvement. Dr. Lynch and others have reported very striking results by drainage through the bronchoscope but we have been unable to persuade patients to try it. Good results have been reported from artificial pneumothorax but there is danger of infecting the pleura with the needle and there would also seem to be some risk in squeezing an abscess that is not surely open to drainage. Our two attempts have been failures.

On 12 abscess cases:

5 were operated on and of these 5 operative cases
- 2 recovered completely
- 1 was relieved of septic condition and is able to work but has some cough
- 2 were relieved of most of the expectoration of offensive pus but had a discharging sinus when last seen.

Of the 7 cases not operated on:

1 was treated with artificial pneumothorax but the treatment had to be abandoned because each treatment was followed by hemoptysis. He was later operated on and is one of the above cases in which a sinus resulted.

1 was treated with artificial pneumothorax, developed an empyema on the treated side, and after improving from this condition finally died of spontaneous pneumothorax on the untreated side.

1 improved somewhat under postural drainage.

4 have passed from observation.

Summary.

Of the 14 post-operative pulmonary sequelæ:

12 were abscesses
2 were pneumonia
2 cases followed teeth extraction
1 case followed appendectomy
11 cases followed tonsillectomy and adenectomy
11 involved the right lung mainly
2 involved the left lung mainly
1 involved both lungs about equally
9 cases had involvement of the lower half of the lung mainly
5 cases had involvement of the upper half of the lung mainly.

Case 6372. Woman, age 27. R. I. Hospital records show that tonsils and hypertrophied turbinates were removed under ether Feb. 11, 1916. The next morning "the respirations and temperature were elevated, with pain in the left chest. Percussion note impaired over the left chest. Breath sounds distant and bronchial. X-ray examination shows increased density of the left lung." Discharged from hospital against advice, Feb. 20. Patient returned to hospital because of cough and chest pain.

After admission to the Sanatorium in November, 1922, patient's husband claimed that she never had completely recovered from the acute illness following tonsillectomy. The breathing was suppressed over the whole left side and absent at the base. The X-ray showed considerable mottling on the left side in the first 4 interspaces, and opacity from the fourth rib to the base. No hemoptysis or fetid sputum. Tubercle bacilli not found. Diagnosis: Cirrhosis of left lung with thick pleura.

SOME OBSERVATIONS ON RADIUM-THERAPY IN CANCER, AT THE INSTITUTE OF RADIUM, PARIS.

By Malford W. Thewlis, M.D.
Providence, R. I.

The association of Madame Curie's laboratory with the Biologic Laboratory, directed by Dr. Cl. Regaud, makes the Institute of Radium of Paris University the foremost center of the world for the study of radium. The therapeutic applications are made at the Pasteur Hospital, while the biologic work is conducted at the Institute, which is situated near the Faculty of Medicine.

Some of the most valuable works in radium-therapy are being accomplished by scientists who secrete themselves in their laboratories, occasionally emerging to give the world the results of their researches. Regaud, whose object in life is the advancement of science, devotes his entire time to the free treatment of sufferers from the most terrible of all afflictions—cancer.

Regaud's technique is different from that we are accustomed to observe. His work on cancer of the tongue and uterus is remarkable.

At the Pasteur Hospital, a histologic examination of every case is made before treatment is instituted and the treatment naturally depends upon the type of neoplasm present. The principle of treatment is not the slow modification of cancer cells, not the reinforcement of the local defense of the organism, but the *destruction of all the cancer cells*. This must be accomplished without grave lesion of the other anatomic elements, which enter into the structure of neoplasms or which form the surrounding tissues.[1]

One of the most important considerations in the radiumtherapy of cancer is the intensity of radiation and the duration of the application. Regaud has pointed out[2] that although 100 milligrams of radium given for 10 hours represents the same dose as 10 milligrams for 100 hours, the difference of intensity and time produced different results. He gave the example of a certain case of epithelioma of the tongue, which was greatly improved and apparently cured with a dose of 10 millicuries of emanation, destroyed in 8 days, by 5 punctures with needles. Had it, on the contrary, been treated with 10 millicuries in 1 day in 2 punctures, the trouble would have been aggravated. A certain case of epithelioma of the cervix of the uterus, not invading the surrounding tissue, was apparently cured with 1 dose of 20 millicuries destroyed (emanation) in 3 days with one focus, while it probably would not have been cured if one had administered the dose by fractions in four weeks. The rules for intensity given by Dr. Regaud are as follows:

1. Tubular epithelioma of the cervix, with the intensity of 100 to 150 microcuries of emanation of radium per hour and per focus.

2. Globo-cellular sarcomata and lympho-sarcomata with the intensity of 50 to 100 microcurie hours.

3. Carcinomata of the breast, with the intensity of 25 to 50 microcurie hours.

4. Epidermoid epithelioma and tumors of connective tissues rich in fundamental substances, with the intensity of 5 to 25 microcurie hours.

One should seek to obtain the desired result in one treatment only, instead of dividing the dose or giving repeated treatments. This, because it has been observed that in the course of successive treatments, healthy tissues become more and more vulnerable, while the cancerous tissues become more and more unaffected. Therefore, a single treatment is always the best—is always the aim.[3]

In various clinics the technique is to use frequently repeated doses of radium or X-rays, and we often see patients with basal-cell epithelioma of the skin who have received several treatments without being cured. The same technique has been used for inoperable cancer of the breast, Radiumtherapeutists often give an intense and short radiation, possibly 100 milligrams for several hours. Dr. Regaud and his collaborators were perhaps the first to use a radiation of a *feeble intensity prolonged for four, eight or ten days without interruption.* For example, in treating cancer of the tongue, ten or fifteen needles containing emanation of radium or the salts of

[1] L'Erreur du Fractionnement, de l'espacement et de la Répétition exagérés des doses, dans la Radiotherapie des Cancers, Cl. Regaud, Feb. 4, 1922, Paris Medical.

[2] Radiotherapy of Cancers, Dr. Regaud, presented to the 5th Congress of the International Society of Surgery, Paris, 9-23 July, 1920.

[3] The Work of Dr. Regaud, Medical Review of Reviews, July, 1921.

radium are inserted into the tongue and left in place for eight days.

For several years German roentgenologists have vigorously worked against the use of small and repeated doses. They inaugurated the large doses for deep treatment of fibroma and cancer of the uterus and breast, with strong filtration and a multiplication of the surfaces of cutaneous entrances. This treatment is given for several hours by means of the new German apparatus, with a Furstenau tube. There are several German X-ray machines installed in Paris, one at the Institute of Radium.

What is the advantage of prolonged applications of radium with feeble intensity? Drs. Regaud and Lacassagne, in their biological studies, have pointed out that the sensibility to radium is at its climax at the moment when the nucleus of the cell divides itself. The applications of radium, therefore, should be prolonged in order that the cycle of evolution of the cells we must reach should include a division of the nucleus.[4]

One might believe that these long applications of radium might produce considerable reaction and sloughing. This is a question of selecting the proper filtration and I have not seen any ill results follow this technique at the Institute of Radium, of Paris. My own experience taught me that in some cases a treatment of 12 days gives the best results and almost invariably there is no severe reaction following this prolonged radiation.

Radium Puncture.

In order to reach all of the cells of a tumor, it is necessary to apply the radium to the deeper parts of the neoplasm. This may be accomplished by means of "bare tubes" of emanation of radium inserted into the growth or by means of needles containing emanation of radium or the salts of radium. Dr. Reguad employs "bare tubes" in certain cases of cancer, especially large neoplasms, but most often uses the platinum iridium needles, into which tubes containing emanation of radium are inserted. The needles are previously dipped in wax in order to hold the glass tubes within.

These platinum iridium needles vary in length from 5 to 30 millimeters and are 4/10 mm. thick. The needles are inserted into the neoplasm at a distance of a centimeter or less from one another and the entire growth and immediate surrounding tissues are included. These needles are left in place for 4 to 8 days and then removed.

Dr. Regaud prefers the salts of radium to emanation of radium, as the radiation is much more constant with the former; as soon as more radium is available, platinum iridium needles containing sulphate of radium will be employed. The salt of radium is in a glass tube and placed in the platinum iridium needle, which is then permanently closed with gold.

CANCER OF THE TONGUE.[5]

Regaud uses radium-puncture for cancer of the tongue and several sterilized needles are inserted into the tongue, into the tumor itself, and one to one and one-half centimeters of the surrounding area are included. These platinum iridium needles are sewn into the mucosa of the tongue and the ends of the thread are placed over the ear and held by adhesive tape. These are left in place for 8 days, during which time the patient is on a liquid diet. Local anesthesia with cocaine makes the procedure practically painless. At the end of 8 days the needles are removed and there is very little reaction following this application.

In certain cases, Dr. Regaud uses radium-puncture for the adenopathy which accompanies the condition, or later X-ray therapy or surgery is resorted to. The dose for cancer of the tongue is usually from 20 to 30 millicuries destroyed in 8 days.

Dr. Regaud gives the dosage in terms of "millicuries destroyed" and this may be applied to emanation of radium and also to radium element. As I pointed out in *The Urologic and Cutaneous Review* of January, 1922, one millicurie of emanation of radium destroyed is equivalent to 132 milligram hours with radium sulphate. It is convenient to use the term "millicuries destroyed" in both instances. The quantity of emanation of one milligram of radium element in one hour is equivalent to 0.00751 millicuries. This quantity would be for 100 milligrams in 10 hours (1000 milligram hours) $0.00751 \times 1000 = 7.51$, which represents 7.51 millicuries of emanation destroyed; likewise, 100 millicuries during 10 hours corresponds to $0.00751 \times 1000 = 7.51$, which signifies the millicuries destroyed. The intensity is obtained by dividing the total dose by the time, therefore $7.51 \div 10 = 0.751$ millicuries destroyed per

[4]The Urologic and Cutaneous Review, January, 1922.

[5]The Urologic and Cutaneous Review, January, 1922.

hour. *With a tube of radium this expresses a constant intensity; with a tube of emanation of radium it expresses an average intensity.*

Cancer and Syphilis.

Cancer often develops from the lesions of syphilis and sarcomatous degeneration may be engrafted upon a gumma. Regaud states that *it is of no practical interest in cancer, to give treatment for syphilis. It is useless and much valuable time is lost, and it may even hasten the neoplastic process.*[6] As soon as biopsy shows cancer to be present there is no need of antisyphilitic treatment. I recall a patient I treated a few years ago, a man who had sarcoma of the neck which developed from a gumma. Antisyphilitic treatment did a great deal of harm in this instance.

Cancer of the Lips.

Regaud concludes as follows:[7]

1. "....epidermoid cancer of the lips is curable by roentgentherapy and by Curietherapy (Regaud's synonym for radiumtherapy), even when the neoplasm has reached a great development.

2. Curietherapy is in every respect preferable to roentgentherapy.

In thin cancers, Curietherapy by superficial application suffices.

In thick cancers, Curietherapy by radium-puncture is more satisfactory or even indispensable.

The very good results obtained in cancers which had greatly outgrown the possibility of operation, permit us to consider as easy the cure by Curietherapy of cases operable and *a fortiori* the cases in the beginning.

Nevertheless, we must not lose sight of the fact that a good technique is the *conditio sine qua non* of success in radiotherapy, as in surgery. Consequently, the choice of the therapeutic agent must remain dependent upon the relative value of the available means.

3. In the absence of a radiotherapeutic technique having been proved for the healing of glandular localizations, these when they are operable, must actually be treated surgically."

Cancer of the Uterus.

Depending upon a histological examination, Regaud usually uses emanation of radium tubes, covered with 2/10 mm. of aluminum in a blind catheter made of pure gum rubber. Several of these emanation tubes are placed in the catheter, which is used for an intrauterine application. Three gold tubes with 15% platinum, 2.55 mm. thick, are also used, each one containing a tube of emanation of radium or a platinum iridium needle containing sulphate of radium. One of these gold tubes is placed in a hollow cork and a small piece of cork covers each end, the whole being dipped in wax, this cork is applied to the cervix. The remaining two corks are between a wire spring and the gold tube is placed in each one. These are used for the parametrium in the event it is involved. The whole apparatus is usually left in place for a period of four to eight days but the dose varies with the type of cancer present. The tubes are, however, removed each day and an antiseptic douche given.

Surface Applications.

For superficial epitheliomas it is often sufficient to use a flat applicator and for this purpose the emanation of radium tubes or platinum iridium needles containing sulphate of radium are employed. The needles are sometimes embedded in either dental composition, gutta percha, or in lead. An applicator may be made by cutting places in the lead for the needles, about 5 millimeters apart; another piece of lead is placed on top of this, then 2/10 mm. of aluminum and finally several millimeters of cork. With this filtration it is possible and convenient to leave the applicator on the diseased surface for several days.

In radiumtherapy the matter of filtration is of great importance. Regaud is able to follow his technique without severe reactions resulting because his methods of filtration are carefully studied. The secondary rays produced by the various metals used for filters are capable of doing much damage, but if platinum, gold and aluminum are used, the secondary rays cause little harm. In surface applicators, the lead filters the *beta* rays of the radium, and the aluminum and cork filter the secondary rays produced by the effect of radium on the lead.

Dr. Regaud's collaborators at the Pasteur Laboratory are Drs. Lacassagne and Jolly (Department of Histology); Ferroux and Coutard (X-ray department). The experiments upon animals are made in this laboratory as well as the histologic

[6]Paris Medical, April 2, 1921.

[7]Bulletin de l'Association Française pour l'Étude du Cancer, Ext. of, July, 1921.

examinations of all patients. At the Pasteur Hospital, where the actual therapeutic applications are made, Dr. Regaud is assisted by Drs. Cesbron, Monod and Richard. The emanation of radium tubes used at this hospital are prepared daily under the direction of Madame Curie.

NOTES ON A SHORT EXPERIMENT IN THE TREATMENT OF ORAL SEPSIS.

By Frank Mears Adams, M.D.
Providence, R. I.

I beg leave to report and discuss the results of a short item of experiment which we made at the Out-Patient Department of the Ear, Nose and Throat Division at the R. I. Hospital, beginning November, 1917.

It was our duty and privilege to examine all the patients upon their first appearance at the clinic. As you know, a large number of these were school children who came at the command of the City Health Department, with papers stating that the bearer perhaps needed removal of the adenoids and tonsils. After seeing several hundreds and perhaps thousands of such children admitted in such a routine manner in the years previous, we were struck with the fact that a large percentage were suffering from general oral sepsis—exhibiting not only infected tonsils and adenoids but also extensive dental caries.

Thereupon, we selected 26 children, none of whom were in good physical condition and all of whom carried decayed teeth and infected and hypertrophied tonsils and adenoids. These children were sent to their dentists and were observed carefully for a period of twelve months by the School and District Nurses and by myself, and were seen again in 1919 at two different six months intervals.

It required persistent coaching and severe and, I fear, rather insulting language to one or two dental brothers to get the desired results. I am proud to say, however, that 23 of this group of 26 children finally received the very best and most complete cleaning up of the teeth we have ever known of. Every bad root was removed or cleaned up and every carious cavity was treated.

Our interest in this process was confined to one question: What is the effect upon tonsils and adenoids in children, when the rest of the oral cavity is producing or holding septic material?

Our results were very gratifying. In seventeen children, the tonsils shrunk up so markedly that one would almost believe X-ray had been used. Every evidence of improvement appeared and it was very plain that the adenoid was equally beneficially influenced. So that, after seeing these children at the end of two years we concluded that surgery could be dispensed with, for the present at least.

Six of the group of 26 were not sufficiently helped to make it safe to leave them. In these six we found advancing cervical adenitis and, according to our present records, four of this group of six have positive Von Pirquet tests and are undoubtedly tuberculous.

There are various points of interest in experimental observation of this nature carried on in large public clinics, and in private work.

Medical School Inspectors.

The medical school inspectors are doing a wonderful work and are, in addition to being a public benefaction, a decided positive help in drumming up business for the profession in general. If the profession would back up this work, business would increase and public charity clinics would be less popular.

Radical Antagonism of the Laity and Medical Men to Surgical Treatment of Oral Sepsis.

This antagonism is founded upon general principles and often based upon experience with careless and inexperienced operators whose work has not produced the desired results.

A broad field for discussion is here opened; one which has never been frankly aired. In this town, practitioners who in the effort to do their patients a favor by sending them for tonsil surgery to a free clinic, do not seem to realize that in thus overloading these clinics they make it necessary for the surgeons on duty to delegate their tonsil operating in part to inexperienced internes. This factor accounts for most of the poor tonsil surgery attributed to the three largest hospitals of Providence.

Selection of Proper Cases for Surgery.

The majority of patients the throat surgeon examines are loaded down with an overwhelming degree of oral sepsis. A very cursory examination

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RHODE ISLAND MEDICAL SOCIETY

Meets the first Thursday in September, December, March and June

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Meets the second Thursday in January, April, July and October

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Meets the second Thursday in each month excepting July and August

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Section on Medicine—4th Tuesday in each month, Dr. Charles A. McDonald, Chairman; Dr. C. W. Skelton, Secretary and Treasurer.

R. I. Ophthalmological and Otological Society—2d Thursday—October, December, February, April and Annual at call of President Dr. H. E. Blanchard, President; Dr. Jeffrey J. Walsh, Secretary-Treasurer.

The R. I. Medico-Legal Society—Last Thursday - January, April, June and October. James B. Littlefield, Esq., President; Dr. Jacob S. Kelley, Secretary-Treasurer.

EDITORIALS

In the retirement of Dr. Buxton as business manager, the JOURNAL loses a competent executive. Quiet and unostentatious, he worked constantly for the betterment of this publication and during his incumbency to office the JOURNAL rose from a narrow financial competence to an assured financial foundation.

His co-workers may well feel gratified in the privilege of his personal association. We take occasion to congratulate him upon the part he has played in the achieved prosperity of the JOURNAL.

Dr. Buxton's successor is a man of somewhat pronounced personality, who not only brings a natural business acumen into our publication affairs, but a considerable experience in parallel lines; in venturing a hope that his tenure in the office of business manager of the RHODE ISLAND MEDICAL JOURNAL may be long and bring added prosperity, we hail and greet Dr. Frank Mears Adams.

QUACKS.

The medical profession is perennially confronted with the problem of the irregular practi-

tioner and the question arises as to what should be the attitude of the medical profession toward the quack. Shall they pursue a militant, aggressive campaign, and appear before a cynical and suspicious legislative committee with arguments which have little influence on the committee's predetermined action, or shall they adopt a *"laissez-faire"* attitude in the hope that, like its many predecessors, the present humbug will burn itself out? Somewhere between these two extremes doubtless lies the correct position for the medical profession. Instead of attempting to prevent these irregulars from practicing their particular form of treatment, let us concentrate our efforts upon insisting that every person claiming the privilege of treating the sick shall show an average knowledge of the fundamental sciences pertaining and necessary thereto, i. e., anatomy, physiology, chemistry, pathology, and physical diagnosis. With an average education in these fundamentals, there need be little quarrel as to the means used to cure disease, whether by drugs, manipulation, surgery, or other modalities. At least, equal privileges should be predicated upon equal attainments.

Just at present we have with us the chiropractor, who claims the right to treat the sick and the privilege of signing death certificates as granted to holders of the title of M.D. In regard to this latter question of signing death returns, we should take this position—not only let them sign their certificates of cause of death, but *make* them sign them. This would at least serve to keep the records straight and deaths due to their ignorance would not be placed at the door of the medical profession, whose members are called in to the case at the last moment, as the chiropractor takes his precipitate leave.

HUMAN PHYSIOLOGY.

The continued study of physiology by physicians is sadly neglected. New bits of knowledge are being constantly contributed by experimentation. Our knowledge of the anatomy, both gross and microscopical, is exact for most bodily structures. While knowledge of the structure of the central nervous system and some microscopical anatomy is not complete, it is a fairly exact science. Quite the reverse is true of our knowledge of normal physiology. There are a vast lot of bodily functions which are not understood at all, others are partially known, still others which are well understood. Physiological processes are so intricate that it is not surprising that our ignorance is still so great.

This void in our knowledge about bodily process leads to many wrong conclusions in diagnosis and treatment. To be able to interpret pathological processes correctly it is necessary to possess exact knowledge of all physiological processes involved. In the diseases of the gastro-intestinal tract we are often misled by our ignorance of the normal, yet very much is known about the motor and chemical processes of digestion. This lack of knowledge of physiological processes leads to fantastic diagnosis of many little understood diseases. This is particularly true of the ductless glands. Altogether too much confidence is placed on the supposed functions of these glands, and unfortunately there are some physicians who are treating certain symptoms and signs and explaining their causes thereby, when known facts do not warrant any such conclusions.

It is a field where one's fancy can wander and speculate, often times to the financial advantage of the dishonest doctor. Undoubtedly it is fascinating field and the future will reveal the truth about the functions of the ductless glands about which very few facts are now known.

We expect a surgeon to know thoroughly the anatomy of the body or at least those parts with which he must deal during any operative procedure. It is just as true that the internist should know thoroughly not only the anatomy of the whole body, but also be well versed in normal human physiology. There are many processes of bodily function which are known, many others are based upon doubtful foundation and still others about which little are known. A thorough knowledge of physiology is necessary if one expects to become a keen diagnostitian and skillful practitioner.

Doctors are prone to listen to traveling salesmen and advertisements about the effects of certain chemicals and drugs upon the body without investigating the facts. Every physician should read journals on physiology and pharmacology, digest their articles carefully, for many false conclusions are reached by investigators. He will then be building on solid foundation and will stand

in a position to interpret pathological conditions in advance of a less studious physician.

It is not easy to keep both feet on the ground when some plausible argument is advanced to explain some problem. It is necessary that one should question all scientific conclusions, and watch for its corroboration. A physician, however, should not pass judgment on new investigations from what he learned thirty years ago in medical school.

REMEMBER.

That all arrangements must be complete by the middle of April for the JOURNAL'S excursion to California to the meeting of the A. M. A.

Those who intend to go will do themselves a courtesy by giving the matter immediate attention.

Glance again over the itinerary in the January issue, and the various places of interest to be visited on the way, that appears in that issue and succeeding ones.

EN ROUTE

THE JOURNAL'S CALIFORNIA TRIP

A CONTINUATION.

Colorado Springs is environed by a greater number and variety of scenic wonders, easily accessible, than any other like area on the globe; superb roads and boulevards, and in many cases lines of electric railways, lead to the numerous points of interest.

Among the more noted features are: Pike's Peak; the Crystal Park Auto Trip, Mt. Manitou Scenic Incline, the Garden of the Gods, the trip to Cripple Creek, North Cheyenne Canyon and the famous High Drive, South Cheyenne Canyon and the Seven Falls, Stratton Park, Broadmoor, Manitou, Williams Canyon, Cave of the Winds, and Ute Pass. Off the beaten path there are scores of places of unrivaled beauty.

Five miles from Colorado Springs, and immediately at the base of Pike's Peak, lies Manitou, the "Saratoga of the West." Here are the mineral springs to which the Indians brought their sick long before the coming of the white man; and, since the healing waters were the gift of the Great Spirit, they named their paradise "Manitou." Sparkling, effervescent, highly agreeable to the taste and adapted to the cure or alleviation of many chronic ills, these soda and chalybeate waters are a prime attraction of the resort. A $400,000 bath house, utilizing the famous mineral waters, has recently been completed.

The town itself is beautiful, with its well-kept lawns, bordering trees, fountains, and attractive pavilions covering the springs; while, clinging Swiss-like to the hillsides, or embowered in the greenery which fringes Fountain and Ruxton Creeks, are numerous picturesque summer homes.

Near Manitou are found the wonders of canyon and gorge, of dizzy height and awful depth, of gigantic rock-form and weird cavern, and the beauties of dashing mountain stream and of sylvan peak-guarded dell. Here are rare flowers for the botanist; in the canyons by which the mountains are gashed and riven the geologist may read the world history. Here, too, is the great Peak, whose snowy summit (14,109 feet) may be gained via the Pike's Peak Cog Railway, or the auto highway; or it may be reached afoot, on horses or on burros.

Nature has indeed dowered Manitou with a prodigality elsewhere unmatched, and it has justly received the palm as the most charming of summer resorts.

ROYAL GORGE.

This is the way the Rev. David M. Steele describes the Grand Canyon of the Arkansas.

"The Royal Gorge is a gigantic chasm, in the heart of the mountains, cut from the summits of lofty peaks to their very foundation stones. Farther and still farther did we penetrate, and, as we did so, the canyon became narrower and the massive walls rose higher, until, in the center, the gorge is only thirty feet wide, while the walls rise 2,627 feet above the track. At this point there is not sufficient room for the railroad and the river to run side by side; hence it was necessary to build the famous Hanging Bridge, which is suspended parallel with the river by immense steel supporters buried in the granite walls on either side. This was the first railroad that ever penetrated the Rocky Mountain fastness. Even today here is a dozen-mile panorama of marvels that beggar description. At Hanging Bridge the rugged rock cliffs, enclosing the roaring river and the track,

rise so abruptly in mid-air for half a mile that they shut out the day and cause stars to shine even while the sun is high in heaven.

The Grand Canyon, through which the Arkansas pours from the high country to the lower, is ten miles long, and the railroad, by a marvel of engineering enterprise and dint of much blasting and ballasting, has made of it a thoroughfare renowned the world over. We slide, clinging close to every twist and turn, where there is scarcely space betwixt wall and river for the single track. The narrowest portion of the passage is the wondrous Royal Gorge. Here the red granite and gneiss walls, sparkling with mica, tower aloft. The sky is a thread almost obliterated by the jagged ramparts. The river boils madly through. The engine sways now to the right, now to the left, dragging the train. The vista ahead, momentarily blocked, opens again, and in some unexpected manner a way is eventually found.

Now, when one makes such a journey, not by any means the least important of the things he learns and the new impressions he receives is a new and great respect for the railroads of his country—both for the railroad as an institution and for railroading as an occupation. On a journey such as this, after seeing any such road in all its parts and such a system in all its workings, one decides that more wonderful even, if possible, than the country that these roads traverse is the human genius which in fifty years has shortened the journey across the continent from five months to as many days, and the still greater genius which, coupled with faithfulness and fidelity, have made that rate of speed commensurate with safety."

SOCIETIES

Providence Medical Association.

The regular monthly meeting of the Providence Medical Association was held at the Medical Library, 106 Francis Street, Monday evening, February 5, 1923, at 8:45 o'clock.

Program: Paper, "Arthritis," Dr. Loring T. Swaim, Boston, Mass.

Discussion by Dr. M. S. Danforth, Dr. Geo. S. Mathews, Dr. Roland Hammond.

The Standing Committee approved the application of Dr. George K. Butterfield. Collation followed.

Dr. Peter Pineo Chase, *Secretary*

Woonsocket District Medical Society.

Meeting of Woonsocket District Medical Society was held Thursday, January 26, at 4:30 P. M. at St. James Hotel. Dr. W. F. Barry spoke on "Hospital Standardization."

T. S. Flynn, *Secretary*

HOSPITALS

Providence City Hospital.

News Items.

On January 1st Dr. John A. Picozzi finished a six months service and went to the Rhode Island Hospital to begin his interneship there. On the same date Dr. Reuben C. Bates and Dr. Ralph DiLeone began interneships.

Dr. William Holt, who has been assistant superintendent since April 1, 1920, resigned to accept a position as an assistant superintendent at the Rhode Island Hospital.

Dr. Maurice Adelman, a former interne, has just finished a service at the Children's Hospital in Boston and is acting temporarily as second assistant superintendent to fill the vacancy made by Dr. Holt's resignation.

At the annual meeting of the Staff Association held at the Hospital on January 17, 1923, the following officers were elected: Dr. Carl D. Sawyer, President; Dr. Bertram H. Buxton, Vice-President; Dr. Harmon P. B. Jordan, Secretary.

At the annual meeting of the Board of Hospital Commissioners the following Consulting, Visiting and Resident Staff Members were appointed:

Resident Staff—Dennett L. Richardson, M.D.; Harmon P. B. Jordan, M.D.

Consulting Staff—Joseph M. Bennett, M.D.; Frank T. Fulton, M.D.; Halsey DeWolf, M.D.; Edmund D. Cheseboro, M.D.; Frank L. Day, M.D.; George S. Mathews, M.D.; Edgar B. Smith, M.D.; John W. Keefe, M.D.; Gardner T. Swarts, M.D.; John T. Farrell, M.D.; N. Darrell Harvey, M.D.; Frederick T. Rogers, M.D.; George W. VanBenschoten, M.D.; George L. Shattuck, M.D.; John E. Donley, M.D.; Murray S. Danforth, M.D.; Roland Hammond, M.D.; Albert H. Miller, M.D.

Visiting Staff—Frank B. Berry, M.D.; F. Nolton Bigelow, M.D.; Roy Blosser, M.D.; William P. Buffum, M.D.; Alex M. Burgess, M.D.; Ber-

tram H. Buxton, M.D.; Harold G. Calder, M.D.; Edward S. Cameron, M.D.; Hilary J. Connor, M.D.; Anthony Corvese, M.D.; Frederic J. Farnell, M.D.; Henry J. Gallagher, M.D.; Nat H. Gifford, M.D.; Professor Frederic P. Gorham, Charles F. Gormly, M.D.; Prescott T. Hill, M.D.; J. Edwards Kerney, M.D.; James W. Leech, M.D.; Robert M. Lord, M.D.; Frank J. McCabe, M.D.; James A. McCann, M.D.; Edwards A. McLaughlin, M.D.; Parker Mills, M.D.; John T. Monahan, M.D.; William C. Muncy, M.D.; Michael J. Nestor, M.D.; Ira H. Noyes, M.D.; Walter C. Robertson, D.M.D.; Carl D. Sawyer, M.D.; George T. Spicer, M.D.; Eric P. Stone, M.D.; Henry E. Utter, M.D.; John G. Walsh, M.D.; Elliott Washburn, M.D.; Pearl Williams, M.D.; Elihu S. Wing, M.D.; William C. McLaughlin, M.D.

The Memorial Hospital.

Meeting of the Memorial Hospital Staff held January 2, 1923. Meeting called at 9:15 P. M. Large attendance. The minutes of the last meeting were read and approved.

An interesting case of a large ovarian cyst containing hair, with a piece of jaw bone with teeth attached, was presented by Drs. Towle and Jones.

Presented by Dr. Sweet of the medical staff, case of portal trombosis with apparent recovery. Several interesting cases were presented by Dr. Hammond.

The committee on rules for internes presented their report. The meeting adjourned at 10:15 P. M. The next meeting will be held February 6th, Tuesday evening.

John F. Kenney, M.D., *Secretary*

St. Joseph's Hospital.
Dr. Chapman

At the monthly Staff Association meeting on Friday, January 12, 1923, it was voted to inaugurate new procedures for the monthly meetings. The first portion of the meeting will be in sections, the Surgical, comprising the surgical, obstetrical and gynecological services; the Medical, comprising the medical, skin and children's departments; and the Eye, Ear, Nose and Throat section. Cases of interest of both regular and private services will be discussed. The second part of the meeting will be for all departments and a prepared paper will be read and discussed. The meetings will be held on the second Friday of each month and all members of both regular and consulting staffs are expected to attend.

The Hospital announces the acquisition of a new ambulance and service therewith, surely a very important step in the history of the Hospital.

The regular monthly meeting of the Staff Association of St. Joseph's Hospital was held on Friday, February 9, 1923. Cases were reported and discussed as follows: By Dr. Harris—A case of amputation of the arm for advanced sepsis; Laparotomy and radium treatment for uterine fibroid; A case of acute renal suppression; A case of pulmonary hemorrhage following ovariotomy; A case of multiple abscess of the kidney; Perforated duodenal ulcer. By Dr. McEvoy—A case of malignant ovarian cyst. By Dr. Beckett—A case of strangulated umbilical hernia. By Dr. Gordon—A case of encephalitis lethargica. By Dr. Jordan—A case of acute lymphatic leukemia in a child 6 years old; A case of Still's disease in a child 2½ years old; Acute endocarditis, acute lobar pneumonia with sarcoma of the kidney. By Dr. Ward—General arteriosclerosis. By Dr. Monahan—Acute rheumatic endocarditis.

(Concluded from Page 42)

of most of the throats immediately shows a positive indication for surgery. This is true of private office work as well as public clinic work. The tonsils are literally reeking with pus. Any throat surgeon will agree with this statement. However, we see, also in large numbers, certain throats which exhibit simply an exuberant hypertrophy of lymphoid tissue, and it is this type of case that should have many other therapeutic measures tried before surgery is recommended. The selection of these cases for X-ray, dietary and allied measures should, however, be left to the throat surgeon. It is incontrovertible that the man who looks into forty throats a day is better qualified to select these cases than his colleague who averages, perhaps, four a day and knows not what he sees when he looks over these four mouths.

Study of results of surgery in undernourished children, in cardiac disease, in joint disease, in tuberculosis and disease of the ears and of the cervical glands, as published by health authorities and by societies for the prevention of cardiac dis-

orders and tuberculosis, give decidedly incriminating evidence of the guilt of the sepsis bearing lymphatic and dental organs of the upper respiratory tract. These studies, systematically carried on for the past twenty years or more, have demonstrated the unfailing value of surgical procedure in the correction and prevention of the disorders enumerated. As samples, we find that the incidence of cardiac disorders has been reduced sixty per cent since 1901.

Surgical removal of diseased cervical glands has been reduced twenty per cent. And nutritional and general physical measurements as shown in school children who have been subject to dental, tonsil and adenoid surgery, give amazing results, visible and statistical.

All experimental work along this line has been worn thread-bare, but is immensely flattering to the exponent of surgery. A slight ripple of backfire occasionally creeps in from the X-ray specialist, the dietetic faddist or other hopeful radical, but these events are not significant.

MISCELLANEOUS

FISKE FUND PRIZE ESSAY.

The Trustees of the Fiske Fund, at the annual meeting of the Rhode Island Medical Society, held May 26, 1922, announced that they propose the following subject for the year 1923: "Has Surgery Lessened the Mortality of Cancer?"

For the best essay on this subject worthy of a premium, they offer the sum of two hundred and fifty dollars ($250).

Every competitor for a premium is expected to conform to the following regulations, namely:

To forward to the Secretary of the Trustees on or before the first day of May of the year for which the prize is offered, free of all expense, a copy of his dissertation, with a motto written thereon, and also accompanying it a sealed packet having the same motto inscribed on the outside, and his name and place of residence within.

Previously to receiving the premium awarded, the author of the successful dissertation must transfer to the Trustees all his right, title, and interest in and to the same, for the use, benefit and behoof of the Fiske Fund.

Letters accompanying the unsuccessful dissertations will be destroyed by the Trustees unopened; and the dissertations may be procured by their respective authors if applications be made therefor within three months.

The essays must be typewritten.

FRANK E. PECKHAM, M.D., Providence,
ARTHUR T. JONES, M.D., Providence,
WILLIAM F. BARRY, M.D., Woonsocket,
Trustees.

HALSEY DEWOLFE, M.D., 305 Brook St., Providence, Secretary to the Trustees.

"IF THE CAP FITS, PUT IT ON."
(Did you know it was CANCER?)

The attempt is being made to teach the layman to consult a physician at the earliest moment when there is any symptom or sign which might suggest a developing cancer. At a meeting of the Cancer Committee the following incidents were related:

1st. A woman last March noticed a lump in her breast and immediately consulted a local physician. He assured her that it was of no consequence and that she need not be disturbed about it. She returned home and waited until May and then consulted another physician, who also told her not to be disturbed about it and advised no treatment. This lump was a cancer and when she was finally seen in June by a third physician there were metastases in the axilla. She was sent to a surgeon and operated on immediately.

2nd. A man was sent into the hospital for diagnosis after having been treated for three months for haemorrhoids, NO EXAMINATION HAVING BEEN MADE. He had extensive cancer of the rectum.

3rd. A woman was treated for six months for nearly continuous flowing and told that her trouble was "change of life." NO EXAMINATION WAS MADE. She was examined by another physician and found to have far advanced cancer of the cervix.

Surgeons who are continually operating on cancerous conditions can tell of many such experiences. "Early diagnosis" is the slogan for the successful treatment of cancer. It is of no use to educate the public to consult a physician if the physician fails to give good service. In the cases above mentioned the patients' chances for cure were very much diminished, while the standing of their physicians suffered irreparably.

A CASE OF DOUBLE VAGINA AND DOUBLE CERVIX.

LEON WILLET HYDE, M.D.
HILLSBORO, ORE.

During the year 1915, a young woman consulted me with regard to her condition in view of prospective matrimony. She said that she had never suffered any at the menstrual peroid, but that at times the flow was scanty. Sometimes the menstrual flow would stop and be followed a few days later by a similar flow. On examination, the vagina was found so small that it was impossible to make a digital exploration. At the fourchette a distinct septum could be felt. This was firm and manifestly formed the central separation of two vaginae. I informed the patient of the condition, and recommended operation. This was delayed for about two months, at which time I removed a complete vaginal septum which, except for size, was characteristic of the vaginal wall in appearance. Using a good sized speculum, I examined the os. Instead of a single os there were two distinct and well formed ora. Except for being small, both vagina and ora were perfect. After painting the cartilaginous bases, left as a result of the removal of the septum, with iodin, I packed the vagina with gauze and put the patient back to bed. Recovery was uneventful.

In about six months this woman was married and moved to Portland. I requested that, should she become pregnant, she ask her physician to let me know. This she did. The physician, getting the report of the case from me, was interested in the outcome of her pregnancy. In due time he reported the birth of a healthy and normal child. In view of the report of Dr. H. G. Steele[1] of Bluefield, W. Va., I felt that this report would be of interest.—*Journal of the A. M. A.*

BOOK REVIEWS

"PHYSICAL DIAGNOSIS."

BY W. D. ROSE, M.D.
C. V. Mosby Co., 1922.

There is no paucity of good books on the broad subject, "Physical Diagnosis." The appearance of a 1922 book should have unusual features to merit particular attention. This volume consists very largely of a very good exposition of the *rationale* of physical conditions of the thorax and as such is to be heartily recommended. The seeker for the interpretation of physical findings, as well as one who wishes to refresh his recollection, will find that close association of pathology with physical signs so desirable now as ever. The treatment of other branches is not as full nor as satisfactory. Laboratory methods are but little discussed and the tremendous importance of their application rarely noted. The illustrations are taken largely from other works and many of them are very bad indeed, a thing absolutely inexcusable in these days of perfect photography and fine printing.

ELEMENTS OF SCIENTIFIC PSYCHOLOGY.

BY KNIGHT DUNLAP,
Professor of Experimental Psychology in Johns Hopkins University.
Published by C. V. Mosby Co., St. Louis, 1922.

Dr. Dunlap's book, entitled, "Elements of Scientific Psychology," published this year, is a great addition to the pyschological literature published by American authors. It embodies the very latest results of psychological research and is a splendid example of the recent trend of psychological study which demands scientific investigation of all its problems.

All of the early chapters of this book are exceedingly well done; worthy of especial note are the chapters on the somatic, visceral, and labyrinthine senses, that on sensory measurements, and also the one on instinct and habit. In the first of these, we have a wonderfully clear and accurate description of all the latest work that has been done on the sensations, and it illustrates the very great development of psychological investigation in the last few years. Dr. Dunlap has approached his problem with an open mind, and has controlled all his work with laboratory data; and at the end of this chapter he states, "Without doubt there are a great number of bodily feelings for which we have no names and concerning whose conditions we know little. Observation of them is exceedingly difficult, on account of our lack of control." This quotation is a good example of the truly investigative viewpoint of the author. The chapter

[1]Steele, H. G.: A Case of Vaginal Septum and Bicornate Uterus, J. A. M. A. 75:309 (July 31) 1920.

entitled, "Some Sensory Measurements," is another careful record of laboratory data which is carefully put together and very readable. The chapter on "Instinct and Habit" refers to the various lists of the instincts by different authors; and it very wisely states that, "The more useful course is to consider instinctive reactions psychologically—that is, as definite reactions to definite stimuli—and in connection with the desires and other emotional states of the animal which reacts." In this chapter also is found a summary of the principles or laws of learning, and these laws are worthy of a careful study by many of our educators.

It should never be the function of a reviewer to agree with everything set before them; and in this case the criticism made is with Appendix I, which deals with "Mental Deficiency and Mental Disease." Dr. Dunlap explains the inclusion of this appendix by saying that it is important that the student of general psychology should have some conception of the nature of the diseases and deficiencies which are most commonly distributed, since he necessarily will meet with references to the names of these conditions, even if he does not study abnormal psychology. With this statement, we cannot but agree; but with many of the statements about mental disease we should take issue. For example, modern experience with general paresis hardly leads us to the conclusion that the disease ends in two or three years in the death of the patient; and again, in speaking of paranoia, there would be but few psychiatrists today who could subscribe to the statement that in this disease there are highly systematized delusions—characteristically of persecution and grandeur—but with no other mental deterioration. Under this heading of "Mental Deficiency and Mental Diseases," there are other rather out-of-date descriptions of mental disease, but psychiatry is changing its nomenclature and its clinical entities so rapidly of late that it may be straining a point to take issue with slight inaccuracies as above noted. Only, in a book so thoroughly the last word in psychological laboratory study, one cannot but wish that the attempts at description of mental states had been handled under the Appendix of Reference Books, rather than by a place of its own between these covers.

HUMAN HEREDITY.

By Casper L. Redfield.

Heredity Publishing Company,
Chicago, Ill.

This small volume is evidently intended to persuade the reader of the truth of the general proposition that in human beings acquired characteristics are freely transmitted by parents to offspring and that the older the parents the more well equipped will their offspring necessarily be because of their greater opportunity to inherit the mental characteristics which their parents by reason of their maturity have acquired. As a scientific treatise the book does not deserve attention. In places, the manner in which the author refers to those who, he feels, are likely to disagree with his conclusions savors overmuch of the crank who believes the whole world totally and maliciously blind to his pet idea. The book is not to be recommended.

THE LIFE OF JACOB HENLE.

By Victor Robinson, M.D.

Medical Life Company.

Upon the paper cover of this little book one reads "The first biography in the English language of one of the makers of modern medicine. Edition limited to five hundred copies." Having read the book, one looks forward eagerly for the appearance of a second biography by Dr. Robinson and wishes that the present edition were not limited. The clear narrative of the main incidents of Henle's life, his problems and his achievements, and the clever interweaving of a background of personal anecdote, marks the author as a master of biographical writing. The book can be highly recommended.